

CLAIM AMENDMENTS

1. (Currently Amended) A wind power generation system comprising:
a wind power generator; and
a laser aerovane mounted on said wind power generator or located near said wind power generator, ~~wherein said laser aerovane observes~~ observing direction and velocity of wind blowing toward said wind power generator; and controlling at least one of yaw angle and pitch angle of said wind power generator ~~is controlled based on results of observation the direction and the velocity of the wind observed by said laser aerovane, whereby output of the wind power generation system, including the wind power generator, is controlled~~ said laser aerovane observing the direction and the velocity of the wind blowing towards said wind power generator by
emitting a laser beam ahead of said wind power generator,
detecting scattered waves of the laser beam, scattered by an aerosol located at any position distant from said wind power generator, at an arbitrary distance, and that floats in the air and moves on the wind at the same speed as the wind, and
detecting a phase difference between the laser beam and the scattered waves in terms of the Doppler effect.

2. (Currently Amended) The wind power generation system according to claim 1, wherein said wind power generator includes a variable-speed generator, and number of rotations of said wind power generator is controlled based on ~~observation~~ the direction and the velocity of the wind observed by said laser aerovane.

Claim 3 (Cancelled).

4. (Currently Amended) The wind power generation system according to claim 1, wherein, in a wind farm where plural wind power generators are arranged, output of the ~~whole wind farm is smoothed~~ stabilized based on the basis of results obtained by observation of by at least one or several laser aerovanes arranged aerovane in said the wind farm.

5. (Currently Amended) The wind power generation system according to claim 1, further comprising ~~any other~~ additional electric power generating means connected to an electric power system in the same manner as said wind power generator connected to the electric power system, wherein output of the wind power generation system including said wind power generator and said ~~other~~ additional electric power generating means is controlled

based on the basis of results obtained by the observation of direction and the velocity of the wind observed by said laser aerovane, and output of the whole wind power generation system including said additional electric power generating means is smoothed stabilized.

Claim 6 (Cancelled).

7. (Currently Amended) ~~The A~~ wind power generation system ~~according to claim 6~~ comprising:

a wind power generator;

a laser aerovane mounted on said wind power generator or located near said wind power generator; and

an output-smoothing device connected to said wind power generator, wherein said laser aerovane observes direction and velocity of wind blowing toward said wind power generator,

adjustment of power produced by said wind power generator is calculated in advance of arrival of the wind observed by said laser aerovane, based on results obtained by observation by said laser aerovane,

power output of the wind power generation system including said wind power generator and said output-smoothing device is controlled based on conditions obtained by calculation,

power output of the wind power generation system is stabilized, and
said output-smoothing device controls power output so that power output fluctuation of said wind power generation system is cancelled when the wind observed by said laser aerovane arrives at said wind power generator.

8. (Previously Presented) The wind power generation system according to claim 7, wherein said wind power generator includes a variable-speed generator and said output-smoothing device controls output frequency fluctuation and output voltage fluctuation of said wind power generation system within a predetermined range.

9. (Currently Amended) The wind power generation system according to claim ~~6~~ 7, wherein said output-smoothing device is selected from the group consisting of a storage battery, a reactive power compensator, and an output limiting resistor.

10. (Currently Amended) ~~The~~ A wind power generation system ~~according to claim 6~~ comprising:

a wind power generator;

a laser aerovane mounted on said wind power generator or located near said wind power generator; and

an output-smoothing device connected to said wind power generator, wherein said laser aerovane observes direction and velocity of wind blowing toward said wind power generator,

adjustment of power produced by said wind power generator is calculated in advance of arrival of the wind observed by said laser aerovane based on results obtained by observation by said laser aerovane

power output of the wind power generation system including said wind power generator and said output-smoothing device is controlled based on conditions obtained by calculation,

power output of the wind power generation system is stabilized, and
said laser aerovane observes the direction and the velocity of the wind blowing towards said wind power generator by

emitting a laser beam ahead of said wind power generator,

detecting scattered waves of the laser beam scattered by an aerosol located at any position distant from said wind power generator, at an arbitrary distance, and that floats in the air and moves on the wind at the same speed as the wind, and

detecting a phase difference between the laser beam and the scattered waves in terms of the Doppler effect.

11. (Currently Amended) The wind power generation system according to claim-~~6~~ 7, wherein, in a wind farm where plural wind power generators are arranged, output of the ~~whole wind farm is smoothed~~ stabilized based on the basis of results obtained by observation of by at least one or several laser aerovanes arranged aerovane in said the wind farm.

12. (Currently Amended) The wind power generation system according to claim-~~6~~ 7 further comprising ~~any other~~ additional electric power generating means connected to an electric power system in the same manner as said wind power generator connected to the electric power system, wherein output of the wind power generation system including said wind power generator and said ~~other~~ additional electric power generating means is controlled based on the basis of results obtained by the observation of direction and the velocity of the

wind observed by said laser aerovane, and output of the whole wind power generation system including said additional electric power generating means is smoothed stabilized.

13. (New) The wind power generation system according to claim 10, wherein said output-smoothing device is selected from the group consisting of a storage battery, a reactive power compensator, and an output limiting resistor.

14. (New) The wind power generation system according to claim 10, wherein, in a wind farm where plural wind power generators are arranged, output of the wind farm is stabilized based on observation by at least one laser aerovane in the wind farm.

15. (New) The wind power generation system according to claim 10, further comprising additional electric power generating means connected to an electric power system in the same manner as said wind power generator connected to the electric power system, wherein output of the wind power generation system including said wind power generator and said additional electric power generating means is controlled based on the direction and the velocity of the wind observed by said laser aerovane, and output of the wind power generation system including said additional electric power generating means is stabilized.